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Inaugural Dissertation

on

Hydrothorax.

by

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Member of the Philadelphia Medical Society. —

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Thoracic cavity
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In addition to these

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The end I have chiefly in view in this essay, is to exhibit the causes, symptoms, and most approved plan of treatment in that species of diaphiscal effusion denominated Hydrothorax. The thoracic cavity is lined, and the different viscera are enveloped by membranes which in a healthy state secrete a fluid calculated to lubricate the containing viscera; but when from disease the quantity of the fluid is increased, as the absorbent powers of the lymphatics are deficient, an accumulation takes place, and Hydrothorax is established.

The situation of the fluid varies; in some instances it is confined to the pericardium, or membrane covering of the heart; most frequently are one or both cavities of the pleura; in others, in the cellular texture surrounding the bronchia; and in some rare instances, in all of the above mentioned situations. In addition to these varieties in the location of the fluid,

is sometimes confined
by the term encysted

is in males, particularly
and from the use of opium
addiction has been found
of this description as
a sign for the reception of
miasma are also subject to
frequent attacks of fits
of various affections
and with anæmia
however the subjects of

long. These are seen
both in males and
females, drunkenness and
improper use of meat
especially when the
frequent attacks of convul-

is sometimes confined in sacks, in which case it is designated
by the term encysted.

The disease is most frequently met
with in males, particularly those whose corporal frames have
suffered from the use of spontaneous potations; individuals whose
institutions have been ^{perniciously} corrupted by debauched habits;
men of this description are frequently seen in the public institutions
for the reception of paupers.

Females are also subject to the disease, and especially those who
have frequent attacks of ^{pernicious} micturition, asthma, and
pneumonia; affections on whom it is not unfrequently
associated with anæmia; and children are least in number
among the subjects of its attack.

Remote causes of Hydrocephalus.

These are very numerous, & not conspicuously
connected with anæmia; and is an effect of a general debauched
life; drunkenness is a prolific source of the disease.

The improper use of mercury, exposure to cold during solera-
tion, especially when the patient is predisposed to the disease;
frequent attacks of misplaced gout, it is often an altera-

but on organic affection
water

Inflammation
continues terminates
in suppulsive remedies
Inflammation occurs
but in debilitated
subjects in an effusing
and. Exposure to cold
wind, and also the
several obstructions

Group
These indicate constrictions
in the thorax and
compression of the
situation of the heart
There are however
cases, which I shall
notice the symptoms

dent on organic affections of the heart, and anoxia of the
arteries.

Inflammation acting upon a debilitated system sometimes terminates in an effusion of serum within the subpulmonic serous cavity sparingly used; hence when inflammation occurs in part contained in the cavity of the chest in debilitated persons, it most unfrequently terminates in an effusion of serum, and thus produces the disease. Exposure to cold is also a remote cause of the complaint, and also those causes producing general dropsy, a cerebral obstruction, scarlatina &c.

Symptoms of Hydrothorax.

These indicate considerable functional derangements in the thoracic serous; many of which are referable to a compression of the lungs, these however varies from the situation of the effused fluid.

There are however, some symptoms common to several species, which I shall first enumerate, and then proceed to notice the symptoms attendant on the fluid in each.

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Hydro-

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and soaring as do

The first symptoms
increased when the
patient is troubled
commensurately, as
well with a giddiness
and a sense of
restlessness; the lips
much disturbed, of
a fear of imminent
misfortune; genera-
lly, and sometimes, to
him, there is threat-
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founded.

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sitation, so that a diagnosis may in most instances be established.

Hydrothorax generally commences with pain and uneasiness at the scrobiculus cordis, and often pain in one or other side of the thorax; a hoisted high coloured vein is said by Blackall to be generally one of the first symptoms. There is dyspnoea, which is increased upon motion, and a horizontal position; the patient is troubled with a cough which is dry in the commencement, and as the disease advances it is often attended with expectoration; there is often oedematous extremities, and a leucophlegmatic countenance expressive of much anxiety; the lips are purple, the patient's sleep is much disturbed, often he awakes with palpitations, and a fear of immediate suffocation; the pulse varies considerably; generally it is small, quick and irregular, and sometimes tense; in addition to these symptoms, there is thirst and scarcity of urine; as the disease advances the symptoms are aggravated; a pain and numbness in the arm, extending to the

invention of the dia-
phragm is orthopneu-
rosis, in which respiration
is impeded by the
right posture, so as
to sit in a chair.

ad property fractu-
res, diseases of the
lungs, that affords us con-
siderable difficulty in
determination of some
times; where the
fault is to be sought.

Diaphragm
resistant, as some-
times offered in
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sence of the dia-
phragm being left

insertion of the deltoid muscle. The most distinguishing symptom is orthopnoea; this term is expressive of a disorder, in which respiration can be performed only in an upright posture, so that the patient is obliged to sit at night in a chair.

Many of the above symptoms are not properly pathognomonic, but often accompanies other diseases of the chest; and it is a combination of them that affords us evidence of the existence of Hydrothorax. The difficulty in some instances is very great; a fluctuation is sometimes perceived by the patient or practitioner; where this is present we can entertain no doubt as to the existence of the affection.

Pricking of the chest as recommended by Corvisart, is sometimes effectual in detecting the presence of fluid in the chest; it is also stated by respectable authority, that the symptoms are aggravated by pressing the abdomen, from the capacity of the thorax being lessened in consequence of the ascent of the diaphragm. The bowels are generally - ✓

covered with fine
hair, is generally in

the cavity of the
nerves must be
directed forward,
short-feet as if
it were a bird,
and the fibers
thin. This situation
is also observed

In Hydrocephalus
increasing weight and
swelling which are
due to horizontal pro-
cesses of the brain

contracted and con-
tracted, the brain
may be said to be
through a fluid, either

disordered with flatulence and costiveness, the appetite is generally impaired.

When the fluid is confined to the cavity of the pericardium, the patient experiences most relief when he is erect, with his body inclined forward, the pulse is more irregular, the patient feels as if his heart were swimming in a fluid, and the fluctuation is more frequently observable in this situation than any other.

It is also observed by Corvisart, that patients afflicted with Hydrocephalus pericardii, feel a painful sensation and a distressing weight about the region of the heart, a difficulty of breathing which threatens suffocation; when he wishes to assume a horizontal posture, he often experiences dyspnoe, but more rarely palpitations.

The pulse is small, weak, frequent, concentrated and irregular; by applying the hand over the region of the heart, tremulous and obscure beats are felt; it may be said that the heart causes its strokes to be felt through a fluid, situated between it and the parieties of

The Thorax. Where percussion is performed, it is obvious; in some cases the left side of the thorax is higher, rounder, and more convex than the right.

When the fluid is situated in the cellular texture, surrounding the bronchia and air cells, it is designated by the term Hydrocephalus pulmonum, or anaëma pulmonum, and is distinguished by the following signs, for which I am indebted to the writings of Dr. D'Orvill.

The difficulty of respiration is constant, and increased by the least motion, though not much varied by the different altitudes of the body; the patient complains of great anxiety about the pectora, and when he attempts to make a deep inspiration, he finds it impossible to dilate the chest, and his breath seems to be suddenly stopped, &c.

The most obvious mark of distinction, is, the circumstance that dyspnoea is not increased by change of posture; for the water being confined to the substance of the lungs, it continues to press equally in all positions of the body.

It remains for me to notice the most common

on of Hydrocephaly, and whether cavities of the symptoms exist. The fluid is often on one side, a contagious humor is sometimes present in the disease, and droppings.

34 40 40
Inflammation between the vertebrae, and of the membranes of the body; except with a slight fever.

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The difficulty of breathing is a marked symptom in the early stages of the disease, and to be observed in the diseases of the brain in medical works has been paid to.

form of Hydrothorax, or that in which the fluid is located, in one or both cavities of the pleura.

2. The symptoms enumerated above, I have only to observe, when the fluid is situated in the cavity of the pleura in one side, a corresponding enlargement on that side of the thorax is sometimes observable. When both cavities participate in the disease, it is more frequently associated with general dropsy.

3. To delineate with accuracy the line of demarcation between the different species of Hydrothorax, is a task of acknowledged difficulty, and of little practical utility; except with a view for the operation of paracentesis.

The difficulty of ascertaining to a certainty, the existence of water in the chest, in many cases, and particularly in the early stage of the disease, is generally acknowledged; and to obtain a correct diagnosis of this and other diseases of the chest, have been long a desideratum in medical science; and although much attention has been paid to it, it is confessed, that our

weakness in relation
This is accounted to be
as the symptoms are
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contemplating these
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not by which the disease
tubercles liquid &
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Dr
D. 1000

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knowledge in relation to the subject, is still very uncertain. This is ascribed to the many diseases incident to these parts, and the symptoms common to many being very similar; and the powerful sympathy existing between this and other parts of the body adds not a little to this uncertainty.

Contemplating this difficulty, ^{once} was induced by a series of observations and experiments, to construct an instrument by which the difficulty is solved, and the presence of tubercles, liquid extravasations, and other diseases may be known and distinguished.

The construction of the instrument, and mode of application to the disease which is the particular object of this inquiry is subjoined.

Treatment of Hydrocephalus.

Cullen asserts that Hydrocephalus will seldom admit of a cure or alleviation. The views which Dr. Cullen entertained of diseases in general, accounts for his ill success; conceiving it to depend on a debilitated state of the system, a plan

practice was adopted
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fact that many of the
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Chapman, are in
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if practice was adapted to correct this deficiency.

By referring to the causes of Hydrocephalus, it will be observed that many of them are calculated to excite the system.

The views entertained by our distinguished professor Chapman, are in opposition to Dr. Cullen, and the ample experience and success of his practice, strengthens and confirms the correctness of his observations.

Blackall, is also an advocate for the inflammatory nature of dropsy.

In the treatment of this disease, our prescription should be regulated by the state of the system and the causes producing the disease, as it is generally symptomatic.

Our object should be first to remove the effused fluid, and secondly to alter the state of the system, and remove the cause occasioning the effusion.

For the attainment of the first object, paracentesis has been recommended, and occasionally practised from the most ancient period, to the present day.

The propriety of drawing off the effused fluid in

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up to the chest.

the form of dropsy, is questioned; certainly no circumstances but the most urgent symptoms would justify the measure; the danger to be apprehended is inflammation, and a collapse of the lungs.

In some instances from interstitial absorption the lungs are very much diminished, and upon eva-
sion the fluid the lungs are unable to perform their
functions; it is of only limited application for when the
fluid is situated in the substance of the lungs the opera-
tion will not release; when situated in the pericardium
the operation is inadmissible; although this operation has
been performed, the results have been for the most part
unfavourable.

The second mode of removing the fluid
is by exciting or increasing the action of the lymphatics,
and for this purpose diuretics are employed.

The state of the system should be carefully attended to,
if any febrile symptoms are present ^{to} resection should
be resorted to, and topical bleeding by the application
of cups to the chest is often necessary; it is a fact most

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variations.

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Mercurial con-
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sumonously insisted upon by professor Chapman, that as long as the astrovial system continues active, the absorbent powers of the lymphatics are feebly exerted; after having reduced the system to the mæcaby standard, we should resort to diuretics.

The best of this class is the aille maritime in substance, tincture, vinegar, syrup, or ozymel. It not only proves diuretic, but it also promotes expectoration; by the former operation it increases the action of the lymphatics, and by this operation to remove the effusion to the latter it renders the patient more comfortable.

The operation of this medicine is much promoted by a mild mercurial course, and hence a popular practice is to combine these two articles; a salivation is considered very flattering.

Blackwell, whose accurate observations on the serous, entitles his opinion to much respect, states from experience, that the aille is much to be depended on, when the serous is scanty, high coloured, full of sediment, and without serum.

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It and however is not limited to this state; I have sometimes
and it would suffice when the urine is partially coagulable;
but in proportion as that symptom becomes more marked
by its extreme constitutional character, inflammation and weak-
ness of the digestive organs, it feels in its effects or is even
injurious. Blackall.

The dose of dried aquill in substance, is
three grains two or three times a day.

P. Chaperon recommends in combination with calomel
in proportion of three grains of the former, to one of the latter,
to be made into pills, one of which may be given morning
and evening. In some cases to calm irritation, opium
may be added, as follows

R. Sella Mer. 3j.

Calomel pp. 2ss

Opie gr. x

Mix. pell. 2ss

One of which may be taken in the morning, a second
at noon and a third in the evening.

In general this
is often a severe
affliction, but
affords immediate relief.

Patients to the chest, or
any part of the body,
but pain. The treatment
will take in the disease
itself, and its operation.
In extracting gallstones
gallbladder is most often
induced or otherwise.

caused by collar and
the gallbladder is most often
the collar or
The operation, common
and consequently pain
and have generally
been since.

In general this medicine will not be continued long, before a copious diuresis follows, which is productive of immediate relief.

In addition to this, a succession of blisters to the chest, so as to keep up constant discharge, is very effectual, especially when the patient complains of local pain. The tincture and the other preparations may be taken in the dose of half a drachm, gradually increased, and its operation assisted by the blue pell.

An interesting question here presents itself, whether the emetic is most effectual when nausea or vomiting is produced, or otherwise?

The question has been particularly discussed by Cullen and Horne. Horne was of opinion that the emetic is most effectual when it produced vomiting. Cullen on the other hand, mentioned that this operation counteracted the secretory properties, and consequently proved injurious; subsequent authors have generally agreed in the correctness of Cullen's views.

To compose the
part, or the epithet
the article most
was; this was,
Dr. W. having
hands of droppings,
confidently was
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idea that it was
shot, and al-
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The Flyglove has
sites with very de-
whole into droppings

of the article in
the deteriorated state
thus causes compo-
The Legitales is pro-
diluted system

To compose the patient, anodynes, Hoffmann's anodyne lotion, or the oil of Sassafras may be given to the patient. The article next in importance is the *digitale purpuria*; this was first introduced into regular practice by Dr. Withering, and highly extolled in the various kinds of dropsy, and particularly in Hydrocephalus; so confidently was this recommended by Withering, Darier, and other celebrated practitioners, as to induce an idea that it was specific; much of this confidence has abated, and although very uncertain in its operation, it may in some cases prove serviceable.

The *Figlobe* has been extensively used in the United States with very doubtful success; this has tended to bring the article into discredit.

The unsuccess attending the use of the article in this country, is supposed to be owing to the deteriorated state from exposure to light and air, or other causes impairing the activity of the remedy. The *digitale* is particularly recommended in persons of a debilitated system, weak pulse, cold surface, and

when complication
is most successfully
and easily
cured. *Digitaria* from
which departs a black
discharge of a
tuniforous fluid.

This is correct
but too big.

There are systematic
symptoms of fibrinous
inflammation included.

There
is commonly a
tumor, and
the hair of the
hair grows twice

when complicated with general dropsy. Dr. Garrison was most successful in dropsy occurring in drunkards, and gives vegetable bitters with anodynes.

Digitalis promises success when the urine is turbid, and deposits a bloody sediment, and partially vegetable by heat cure of dropsy following Scrofuloma, where the discharge is high coloured and deposits a sediment it uniformly feels Blackball.

This if correct, is a circumstance that we cannot appreciate too highly.

Where the system is excited, a strong pulse and other symptoms of febrile action, the use of the digitalis is precluded.

There are four forms in which digitalis is commonly employed, viz: in substance, infusion, tincture, and Dr. Garrison's saturated tincture. ✓

The dose of the article in substance is from one to three grains twice a day; of the infusion, as prepared.

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It is stated by
one may be taken
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final effects are pro
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sustained; the
action on the action
is due to its purgative
counteracting the
stomach, ¹² and for
the ¹² recommended

by Withering from an ounce to two ounces, in the twenty-four hours. The dose of Lorviv's saturated tincture, is from thirty to ninety drops in the course of the day.

It is stated by Withering, that eight ounces of the iu-
sow may be taken in most cases before nausea commences,
and of the powder thirty grains.

The above are the doses as recommended by Blackall
and subsequently adapted by the highest authorities.

The mode of making the different preparations may be
found in the dispensatory, constantly keeping in view
the activity of the article; the dose should be small at first
and gradually increased in quantity, until some consti-
tutional effects are produced. The most favourable of these is
diuresis. When this takes place the medicine should be
discontinued; the same remark is applicable to the de-
nudation of the arteriole system to its nauseating the stomach,
and also to its purging the patient. For the best method
of counteracting the injurious effects of an over quantity of
hyoscyamus, I refer to Chapman's Therapeutics.—

Territ recommends the digitalis to be discontinued at

The excretion of
performed during
has been employed
the result of this
urine and oxygen

The carbonic
acid in the stomach
is removed by the living
cells.

Previous
and the action
of method is
now far removed
from me now a
normal system
efficiently pro-

viding
the state of the

The carbonat of potash, is particularly serviceable when the stomach is much disordered. It is recommended by Pingle to assist its operation by the vegetable bellies.

Purging is another method employed to increase the action of the lymphatics; but in Hydrocephalus this method is said to be ineffectual.

How far emetics would succeed, I am unable to say, from my own experience; that they stimulate the secretory system into increased action, however, sufficiently proven.

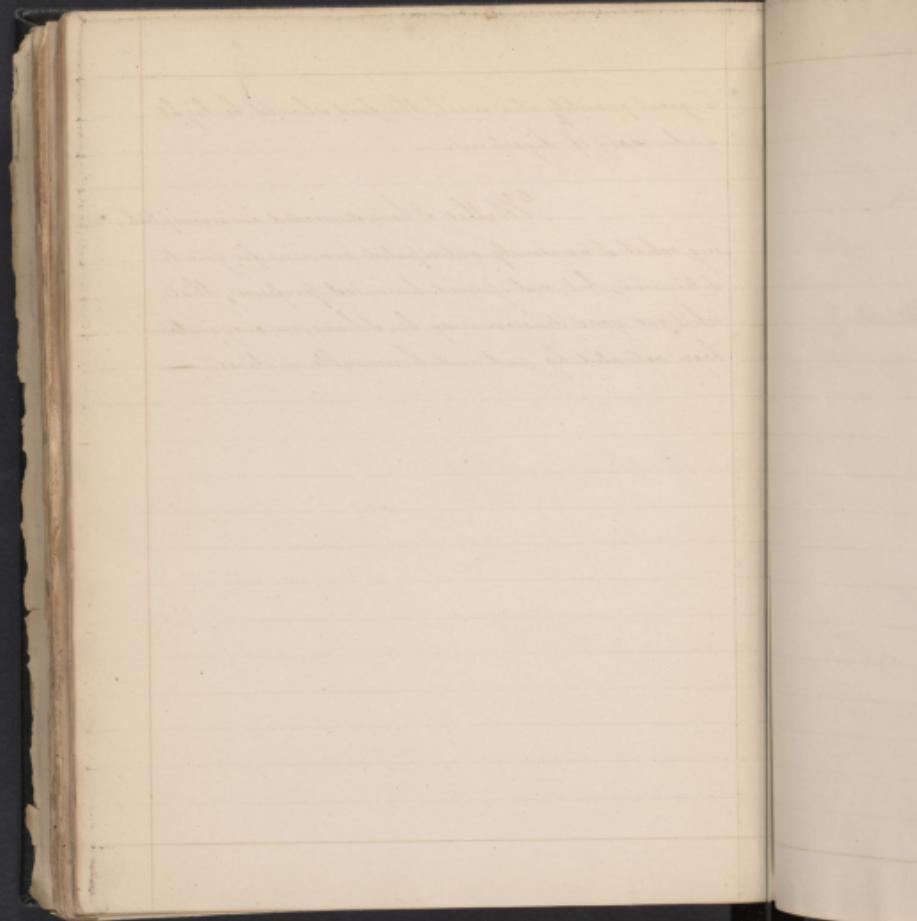
The bowels should be kept regular by mild laxatives. The diet should be regulated by the state of the system; the patient should not eat

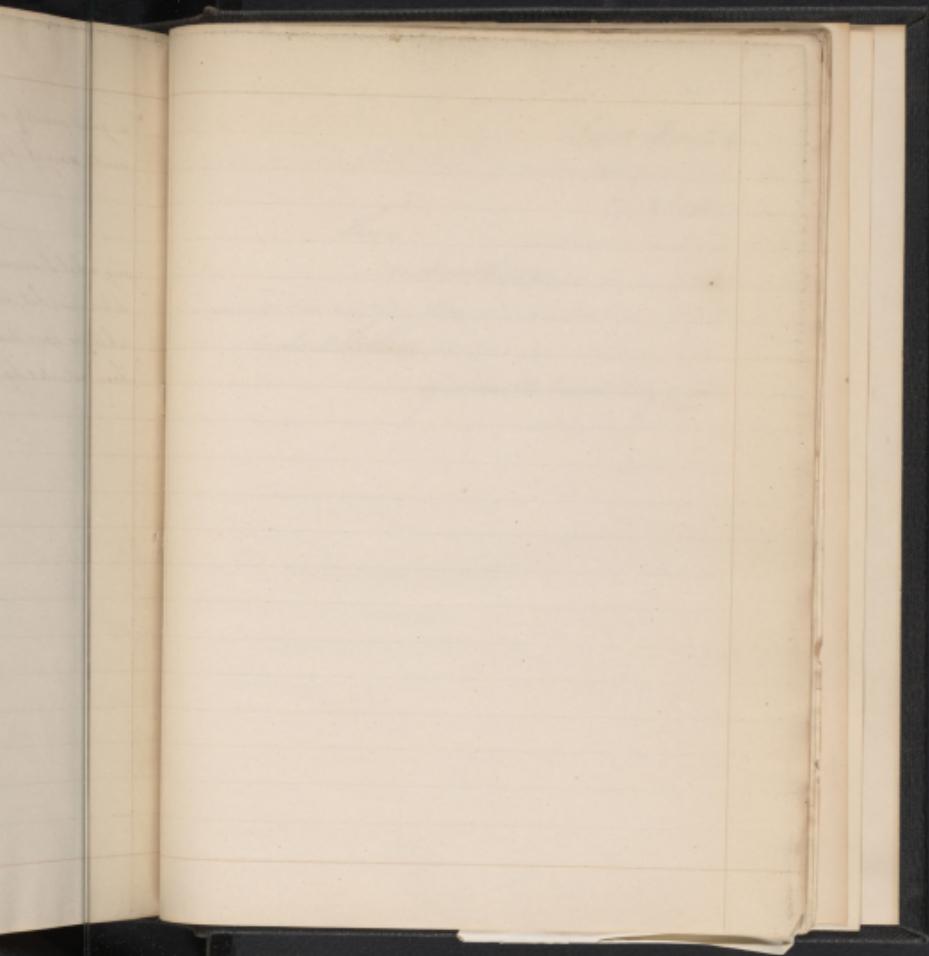
great quantity at
the easy of high

of what I am now
domine; but, most
dovor your decis
ion reactivated by f

a great quantity at a meal, the food should be light
and, easy of digestion.

Whether I have succeeded in accomplish-
ing what I anxiously anticipated remains for you to
determine; but, rest assured, honoured professor, that
whatever your decision may be, I have in every instance
been actuated by just and honourable motives. —





Errata

- p 3, varies for vary
4. attendant for attended.
5. admission
5. existences for existences
5. Daphneon for Daphnean
6. Painties p 8. Conundrum p 11. Collage for collapse
13. Scilla for Sciller 14. Preparations. 15. purpura
16. 15. Danversi/Danversum. Renunciate.
17. 18. Territor for Territor